

Type species of phasmid genera with particular reference to the status of *Baculum* Saussure, 1861, *Ramulus* Saussure, 1862, and *Gratidia* Stål, 1875.

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Some information which I had previously been unable to check due to difficulties obtaining copies of papers, and a few errors, have come to light concerning my recent check list of type species (Bragg, 1995a). Most are quite straight forward changes and are listed at the end of this paper. However while checking the synonymies of various species for the Phasmid Database, I discovered that both *Ramulus* and *Baculum* had been described earlier than recognised by most authors. The consequences are significant as in both cases the type species are different from those quoted by Kirby (1904) and myself (1995a). In the case of *Ramulus* the current use of the name is incorrect.

Baculum Saussure, 1861

The genus *Baculum* is one of the largest genera in the Phasmida. One of the reasons for this is the accidental synonymising of several genera, this has been partly due to authors being unaware of, or disregarding the type species.

In my recent check list of type species (Bragg, 1995a: 32) *Baculum cunicularis* (Westwood) was given as the type species of *Baculum* Saussure, 1870. The spelling of the specific name was an error (copied from Saussure, 1869), it should have read *B. cuniculus* (Westwood). The publication date for the paper has usually been quoted as 1870, however checking has revealed that the journal was published in two parts, part one in 1869 and part two in 1870; Saussure's paper was in part one so the date on my list should have read 1869. However I have also found that *Baculum* was described before 1869.

In 1861 Saussure (p. 127) described *Baculum* as a subgenus of *Bacillus* Latreille, 1825. He included only one species, *ramosum*, which he described as new; *Baculum ramosum* Saussure is therefore the type species of *Baculum* Saussure, 1861, by monotypy.

In 1869 Saussure (p. 292) again described *Baculum* (still as a subgenus of *Bacillus*) and included *Bacillus cunicularis* Westwood (specific name misspelt) and *Bacillus (Baculum) ramosus* Saussure. In 1904 Kirby selected *Baculum cuniculus* (Westwood) as the type species of "*Baculum* Saussure 1870" (Kirby, 1904: 327). This is a strange selection for Kirby to make, his catalogue clearly shows by the inclusion of the name and reference (Kirby 1904: 329) that he was aware of the earlier publication by Saussure of the name *Baculum ramosum*. All subsequent authors have treated *Baculum cuniculus* (Westwood) as the type species.

In 1875 Stål described many new genera and produced a detailed key to the genera, however he did not include either *Ramulus* or *Baculum*. Stål (1875: 67) included *cuniculus* (Westwood) in his new genus *Clitumnus*, this clearly would have synonymised the genera if *cuniculus* was the type species of *Baculum*. Kirby selected *Phasma (Bacteria) nematodes* de Haan as the type species of *Clitumnus*. Kirby listed the two genera as synonyms (1904: 327) because he mistakenly considered *cuniculus* and *nematodes* to be the type species. However Kirby did synonymise the genera (although not quite as he thought) by including *nematodes* and *ramosus* in the same genus.

Brunner von Wattenwyl (1907) omitted *ramosum* from his monograph. However he included *nematodes* in his new genus *Cuniculina*. Brunner thus synonymised *Cuniculina* with *Clitumnus* Stål; Brunner's use of the name *Clitumnus* was incorrect.

In Saussure's descriptions of *ramosum* both the male (1861: 128) and the female (1869: 294) clearly lack horns on the head. According to Brunner's key (1907: 181) this would place *ramosum* in *Clitumnus* of Brunner (not *Clitumnus* Stål).

Currently *Baculum*, *Cuniculina* and *Clitumnus* are treated as synonymus because this is the way that they were treated by Karny (1923: 235) when he published some corrections to Brunner's work. Although I am not at present disputing this decision by Karny, some of his statements regarding the genera are incorrect. Karny stated that if Brunner's two genera were treated as distinct, a new name would be required for *Clitumnus* of Brunner (not Stål), since Karny was mistaken about the type species involved, this is not the case. *Clitumnus* of Brunner, 1907 should have been referred to as *Baculum* Saussure, 1861. *Cuniculina* of Brunner, 1907 should have been referred to as *Clitumnus* Stål, 1875.

***Ramulus* Saussure, 1862 and *Gratidia* Stål, 1875**

Ramulus Saussure 1862 (p. 471) was originally established as a subgenus of *Bacillus* Latreille, 1825, with *Bacillus (Ramulus) humberti* Saussure 1862 as the type species, by monotypy.

Bacillus (Ramulus) humberti was subsequently synonymised with *Lonchodes pseudoporus* Westwood, 1859 by Saussure (1869: 300). In the same paper Saussure (1869: 291) used the name *Ramulus*, again as a subgenus of *Bacillus*, and included only one species: *Bacillus carinulatus* Saussure, 1868. *Bacillus (Ramulus) carinulatus* (Saussure, 1868) is thus the type species of *Ramulus* Saussure, 1869 (not *Ramulus* Saussure, 1862), by monotypy.

All subsequent authors have treated *Bacillus carinulatus* Saussure as the type species of *Ramulus* Saussure 1869, most seemingly unaware of the earlier usage, examples include: Kirby (1904: 329), Karny (1923: 236), Bragg (1995a: 36). Brock & Shlagman (1994: 104) were aware of the earlier usage, but discounted it dealing with "*Ramulus* Saussure, 1870 [sic]: 291. Type species: *Bacillus carinulatus* Saussure 1868: 63". Subsequent treatments of *B. carinulatus* have placed it in *Baculum* Saussure 1869 (Kirby, 1904: 328), or *Clitumnus* Stål, 1875 (Brunner von Wattenwyl, 1907: 192); *Clitumnus* is a junior synonym of *Baculum* Saussure (Karny, 1923: 235). Thus *Ramulus* Saussure, 1862 (not *Ramulus* Saussure, 1869) is a junior synonym of *Baculum* Saussure, 1861.

Ramulus Saussure, 1869 is not an available name, however *Gratidia* Stål, 1875 is an available synonym, so no replacement name is necessary. In future all species currently regarded as belonging to *Ramulus* 1869 should be referred to *Gratidia*. The tribal name Ramulini should be changed to Gratidiini.

Changes to the list of type species

The following corrections and additions should be made to the list of type species (Bragg 1995a) and to version 1.5 of The Phasmid Database (Bragg, 1995b). For convenience I am including changes caused by the corrections to *Baculum* and *Ramulus* which are explained above.

A. Changes to existing entries:

1. **Cyphocrania* was described by St. Fargeau & Audinet Serville, not just Audinet-Serville, and the date was 1827 (not 1825), the type species was by subsequent designation.
2. **Gratidia* becomes *Gratidia*.
3. The type species of *Aplopus* was described by St. Fargeau & Audinet Serville.
4. *Cladoxerus* was described by St. Fargeau & Audinet-Serville in 1827, with *gracilis* St. Fargeau & Audinet-Serville as the type species, by monotypy.

5. *Epibacillus* becomes **Epibacillus* (synonymised with *Bacillus*).
 6. The type species of *Otraleus* was described by Günther.
 7. The type species of *Parabrosoma* is *bigibbum*, by original designation (not by monotypy).
 8. *Parastheneboea* becomes **Parastheneboea*.
 9. The type species of *Phasma* is *empusa*, by subsequent designation.
 10. *Prisopus* was described by St. Fargeau & Serville in 1827 (not by Latreille in 1825), the type species is *P. sacrata* (Olivier), by subsequent designation.
 10. *Ramulus* Saussure 1870 becomes **Ramulus* Saussure 1869 (a preoccupied name).
 11. *Baculum* Saussure 1870 etc. becomes *Baculum* Saussure, 1861, type species *ramosum* Saussure, by monotypy.
- B. Additional entries to be added to the list:
1. **Hermagoras* Stål, 1875, type species *personatus* (Bates), by subsequent designation (synonymised with *Lonchodes*).
 2. **Ramulus* Saussure, 1862, type species *humberti* Saussure, by monotypy (synonymised with *Baculum*).
 3. **Tisamenus* Stål, 1875, type species *serratorius* Stål, by subsequent designation (synonymised with *Hoplocloia*).
 4. **Xylodus* Saussure, 1859, type species *adumbratus* Saussure, by monotypy (synonymised with *Phibalosoma*).
 5. *Denhama* Werner, 1912, type species *aussa* Werner, by monotypy.

Spellings of generic names

Some of the minor changes above were kindly brought to my attention by Philippe Lelong. He also queried several generic names in species.dbf of The Phasmid Database; although there were a few typing errors and spelling errors on my part, many of queries were cases of spelling errors by the original authors, or in some cases incorrect emendations. These are not listed in the genera.dbf as they were not described as new genera, they are incorrect spellings. The most variable name is *Aschipasma* or *Ascepasma* or *Acepasma* or *Ascephasma* being used for *Aschipasma*. Perhaps the most potentially confusing incorrect spelling is Kirby's (1896: 457) use of *Hermagenes* instead of *Hermogoras*. Generally spelling errors are quite easy to recognise, however if the error occurs in the first few letters it can be confusing if one is trying to check it on an alphabetical list, as with the use of *Acepasma* for *Aschipasma*, or *Alopus* for *Aplopus*. The potential problems are greater when using a computer database because the similar spellings will not necessarily appear, depending on the method of searching which is being used. This should be borne in mind when doing searches with The Phasmid Database. Generally a search for the first three or four letters of a name is better than a more specific search as it will display similar names or variations in the spellings.

Publication dates

The date of publication of papers is often difficult to check although it may be essential for identifying the valid name of a species or genus. Journals may produce one volume over a period of several years, this is usually obvious from the volume numbers and the dates. What is less obvious is that journals produced annually are not always numbered so that one volume refers to a calendar year. For example, *Annales de la Société entomologique de France*, series four, volume one is sometimes quoted as 1861, however although the earlier parts were published in 1861, the later parts of this volume which include the pages describing *Ramulus* were actually published on January 22nd 1862. This journal was by no means the only one; also involved in the confusion surrounding *Ramulus* is *Mémoires de la Société de Physique et d'Histoire naturelle de Genève*,

volume 20 was produced in two parts, the first in 1869 and the second in 1870. Saussure described *Ramulus* for the second time in "Mélanges Orthoptérologiques" which was the last paper in the first part of volume 20. As libraries usually have journals bound as complete volumes it is important to check the dates of each part, if possible.

Often more difficult to detect, are cases where for some reason the issue was produced late and therefore not at the time stated on the cover (such as occurred with the last issue of *Phasmid Studies*). Some type species have not yet been included in The Phasmid Database or on the list in the last issue of *Phasmid Studies* because I have been unable to obtain copies of the original publications of old publications, or because I need to check on the dates of publication.

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